We claim:

1. A method of encoding a local time base of an audio visual sequence in the compressed data comprising the steps of:

obtaining instances of the audio visual sequence by temporal sampling;

determining the local time base of the said instances to be encoded into compressed data;

encoding the said local time base in two parts, comprising of a modulo time base that marks the occurrence of a set of time reference spaced evenly at a specific interval on the local time base and a time base increment relative to the said evenly spaced time reference;

inserting the modulo time base into the compressed data whenever the specific interval have elapsed; and

inserting the time base increment within the compressed data of the said instances of the audio visual sequence.

2. A method of claim 1, wherein a plurality of compressed bitstreams containing local time base information encoded therein are multiplexed and de-multiplexed, for de-multiplexing further comprising the steps of:

decoding the time base offset of the individual compressed bitstream;

examining the multiplexed bitstream for the next compressed instance and placing the said instance into the appropriate compressed bitstream until a modulo time base is encountered in the multiplexed bitstream;

inserting a modulo time base to each of the compressed bitstreams; and

repeating the last two steps until the multiplexed bitstream is exhausted.

3. A method of decoding a local time base of an audio visual sequence from the time base of the compressed data encoded according to claim 1 comprising the steps of:

initializing the reference time base taking into account the time base offset;

incrementing the reference time base by a specific interval for each modulo time base decoded;

decoding the time base increment of the compressed instance; and

determining the decoding time base of the said instance by adding the said decoded time base increment value to the reference time base.

4. A method of encoding the time base according to claim 1 where the local time base, time base increment and time base offsets are in units of milliseconds and the specific interval has a duration of 1000 milliseconds.

5. A method of claim 1, wherein a plurality of compressed bitstreams containing local time base information encoded therein are multiplexed, for multiplexing further comprising the steps of:

synchronizing the local time base of the individual compressed bitstream to a common time base by encoding and inserting the time base offset in the multiplexed bitstream;

examining each of the compressed bitstream for the next compressed instance to be placed into the multiplexed bitstream until all the compressed bitstreams have arrived at the modulo time base;

inserting a common modulo time base into the multiplex bitstream and skipping the modulo time base of the compressed bitstreams; and

repeating the last two steps until all compressed bitstreams are exhausted.

6. A method of multiplexing a plurality of compressed bitstreams as in claim 5 where the individual compressed bitstreams are themselves multiplexed bitstreams.

7. A method of encoding a local time base of an audio visual sequence in the compressed data comprising the steps of:

obtaining instances of the audio visual sequence by temporal sampling;

determining the local time base of the said instances to be encoded into compressed data;

encoding the said instances in one of two methods comprising of a first method of compression without reference to any future instances and a second method of compression which refers to the future reconstructed instance;

encoding the said local time base in two parts, comprising of a modulo time base that marks the occurrence of a set of time reference spaced evenly at a specific interval on the local time base and a time base increment;

encoding the time base increment for the instance compressed using the first compression method as an absolute value relative to the said evenly spaced time reference;

encoding the time base increment for the instance compressed using the second compression method as a relative value to the local time base of the previously compressed instance using the said first method;

inserting the modulo time base into the compressed data whenever the specific interval have elapsed; and

inserting the time base increment within the compressed data of the said instances of the audio visual sequence.

8. A method of decoding a local time base of an audio visual sequence from the time base of the compressed data encoded according to claim 7 comprising the steps of

initializing the reference time base taking into account of the time base offset;

incrementing the reference time base by a specific interval for each modulo time base decoded;

decoding the time base increment of the compressed instance; and

determining the time base increment to be one of two types, absolute or relative, depending on the first or second compression method used in the encoding of the instance, respectively;

determining the decoding time base of the said instance by adding the said decoded time base increment value to the reference time base if the time base is of the first type; and

determining the decoding time base of the said instance by adding the said decoded time base increment value to the decoding time base of the previous instance encoded using the first compression method, if the time base increment is of the second type.

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9. A method for determining a local time base of video object planes (VOPs) in a compressed data stream that includes a time code, a modulo time base and a time base increment, wherein the time code is stored in a group of pictures (GOP) header inserted at a beginning of the compressed data stream, the modulo time base indicating whether at least one predetermined time interval is to be added to the time code to obtain a reference time base, the time base increment representing a local time base having a certain time base, comprising:

decoding the time code;

decoding the modulo time base of a video object plane;

decoding the time base increment of the video object plane; and

determining the local time base of the video object plane by adding the decoded modulo time base and a value of the decoded time base increment to the reference time base of one of a previously decoded intra-coded video object plane (I-VOP) and a predictive-coded video object plane (P-VOP), wherein the reference time base of the one of the previously decoded intra-coded video object plane (I-VOP) and the predictive-coded video object plane (P-VOP) form the decoded time code.